REMARKS

Claims 1-22 have been previously cancelled without prejudice. Claims 23-34 have been previously added to replace claims 11-22, and thus Claims 23-34 are currently pending.

Claim objections

Rejection under 35 USC §103

In the Official Action, the sole rejection of Claims 23-34 was under 35 U.S.C. 103(a) as being unpatentable over the Tsuzuki et al. reference in view of Chiba et al. reference. This rejection is respectfully traversed for the reasons set forth below.

Tsuzuki et al. examined the relationship between the conformation of Sonifilan (SPG) and hematopoietic responses in cyclophosphamide-induced leukopenic mice. Tsuzuki et al. disclose that the mice administered cyclophosphamide and SPG or SPG-OH expressed and produced higher levels of IL-6, NK1.1, SCF and M-CSF, than the mice administered only cyclophosphamide.

Even if these results may suggest a potent activity of SPG and SPG-OH on hematopoieisis, further *in vivo* results would have been necessary to convince one skilled in the art that SPG and SPG-OH could stimulate the regeneration of cells in the bone marrow and the peripheral blood.

As indicated in Professor Vaclav Vetvicka's declaration under Rule 132 (copy attached), Sonifilan is a polysaccharide produced by the fungus *Schizophyllan commune*, whereas laminarin is a polysaccharide produced by the brown algae.

Furthermore, these two glucans have a different molecular weight and conformation. These two glucans can thus not be directly compared: results obtained with Sonifilan cannot be obviously extrapolated to Laminarin, and *vice versa*.

To further reflect the differences between the claims and the cited references, Applicants respectfully submit a complete copy of the Chiba et al. as an attachment.

As indicated in the attached declaration of Professor Vaclav Vetvicka under Rule 132, Chiba et al. essentially discloses that zymosan and the beta-glucans have a common receptor on macrophages (in vitro data), which is trivial since Zymosan is known to contain beta-glucans.

In addition, Chiba et al. discloses that, in vivo, the administration of particular β1-3 glucans, namely OL-2, SSG and GRN, (Laminarin was not tested) induced H_2O_2 synthesis (Fig. 5) and phagocytosis of zymosan particles (Fig. 6), which measure the well-known activation of macrophages by beta-glucan treatments.

Furthermore, the activation of peritoneal macrophages by beta-glucans has no connexion with a possible activation of hematopoiesis which requires an effect on the bone marrow.

Consequently, the data disclosed in Chiba et al. can in no way infer that the beta-glucans, notably laminarin, can have an effect on the hematopoiesis of the animals/humans subjected to a hematotoxic challenge;

Hence, the skilled artisan, reading Chiba et al., cannot conclude anything regarding laminarin and activation of hematopoiesis.

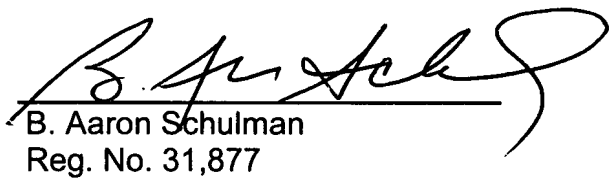
The present invention is thus unobvious in view of Tsuzuki et al. and Chiba et al., taken alone or in combination.

From the foregoing remarks, it clearly appears that the instant invention as defined in the claims is unobvious over the cited prior art. Thus, the Examiner's rejection under 35 U.S.C. §103 on the basis of the cited references is respectfully traversed and should be withdrawn.

In view of the above amendments and remarks, Applicants respectfully submit that the claims are in condition for allowance. A Notice of Allowance is therefore respectfully solicited. Should the Examiner believe that a discussion with the undersigned counsel would expedite prosecution of the application, a telephone call to (703) 739-4900 would be welcomed.

Respectfully submitted,

Dated: April 11, 2007

By: 

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